

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for refining a geometric description model of an object using an image of that object, the method comprising:

providing an image of the object;

providing a rough geometric description model of the object;

extracting sub-models from the rough geometric description model;

finding poses of the sub-models in the image; and

using the found sub-models to construct a refined geometric description model;

using constraints to further refine the refined geometric description model;

and

refitting the further refined geometric description model to the found sub-model poses to provide a new pose of the further refined geometric description model.

Claim 2 (canceled)

Claim 3 (currently amended): The method of claim 2 1, wherein one of the constraints is an angular constraint.

Claim 4 (original): The method of claim 1, wherein the model includes a wire frame structure.

Claim 5 (original): The method of claim 4, wherein the wire frame structure includes vertices and segments connected thereto.

Claim 6 (original): The method of claim 1, wherein the refined model for the object is required to satisfy certain user-defined geometric constraints.

Claim 7 (original): The method of claim 6, wherein the geometric constraints specify that segments must form 90 degree angles at vertices.

Claim 8 (original): The method of claim 1, wherein finding poses of the sub-models in the image includes:

validating the poses of the sub-models.

Claim 9 (original): The method of claim 1, wherein providing a rough model of the object includes also providing a rough model pose.

Claim 10 (currently amended): A method for refining a geometric description model of an object using an image of that object, the method comprising:

- providing an image of the object;
- providing a rough geometric description model of the object; and
- constructing a refined geometric description model using the image;

using constraints to further refine the refined geometric description model;

and

refitting the further refined geometric description model to the found sub-

model poses to provide a new pose of the further refined model.